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DAIMLERCHRYSLER

DaimlerChrysler
Intellectual Capital Company LLC.

Fax

To:	Examiner Vanel Frenel	From:	Roland A. Fuller, Reg. 31,160

Fax:	(571) 273-8300	Pages:	40 + cover

Phone: (571) 272-6769		Date:	July 27, 2006

Group Art Unit: 3626

Re: Application No. 09/801,298

See the attached Appeal Brief - *REVISED* and a copy of the Fee Transmittal that
was submitted on 7/25/06.

*I hereby certify that this correspondence is being facsimile transmitted to the Patent
and Trademark Office (Fax No. (571) 273-8300) on July 27, 2006..*

Susan J. Sidwell

—*COPY*—

PTO/SB/17 (12-04)
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FEE TRANSMITTAL
for FY 2005

Effective 10/01/2004. Patent fees are subject to annual revision.

☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT | ($) | 500

Complete if Known	
Application Number	09/801,298
Filing Date	March 7, 2001
First Named Inventor	Mahoney et al.
Examiner Name	V. Frenel
Art Unit	3826
Attorney Docket No.	705441US1

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JUL 27 2006

/4

METHOD OF PAYMENT (check all that apply)

☐ Check   ☐ Credit card   ☐ Money Order   ☐ Other   ☐ None

☒ Deposit Account:

Deposit Account Number: 03-1800

Deposit Account Name: DaimlerChrysler Intellectual Capital Company LLC

The Director is authorized to: (check all that apply)
☒ Charge fee(s) indicated below   ☒ Credit any overpayments
☒ Charge any additional fee(s) during the pendency of this application
☐ Charge fee(s) indicated below, except for the filing fee
to the above-identified deposit account.

FEE CALCULATION

1. BASIC FILING FEE

Large Entity		Small Entity			
Fee Code	Fee ($)	Fee Code	Fee ($)	Fee Description	Fee Paid
1011	300	2011	150	Utility filing fee	
1012	200	2012	100	Design filing fee	
1013	200	2013	100	Plant filing fee	
1014	300	2014	150	Reissue filing fee	
1005	200	2005	100	Provisional filing fee	
				SUBTOTAL (1)	($) 0

2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

	Extra Claims	Fee from below		Fee Paid
Total Claims	-20 ** =	0	X 0 =	0
Independent Claims	-3 ** =	0	X 0 =	0
Multiple Dependent			=	0

Large Entity		Small Entity			
Fee Code	Fee ($)	Fee Code	Fee ($)	Fee Description	
1202	50	2202	25	Claims in excess of 20	
1201	200	2201	100	Independent claims in excess of 3	
1203	360	2203	180	Multiple dependent claim, if not paid	
1204	200	2204	100	** Reissue independent claims over original patent	
1205	50	2205	25	** Reissue claims in excess of 20 and over original patent	
				SUBTOTAL (2)	($)

*** or number previously paid, if greater. For Reissues, see above*

FEE CALCULATION (continued)

3. ADDITIONAL FEES

Large Entity		Small Entity			
Fee Code	Fee ($)	Fee Code	Fee ($)	Fee Description	Fee Paid
1051	130	2051	65	Surcharge - late filing fee or oath	
1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet	
1053	130	1053	130	Non-English specification	
1812	2,520	1812	2,520	For filing a request for reexamination	
1804	920*	1804	920*	Requesting publication of SIR prior to Examiner action	
1805	1,840*	1805	1,840*	Requesting publication of SIR after Examiner action	
1251	120	2251	60	Extension for reply within first month	
1252	450	2252	225	Extension for reply within second month	
1253	1020	2253	510	Extension for reply within third month	
1254	1,590	2254	795	Extension for reply within fourth month	
1255	2,160	2255	1080	Extension for reply within fifth month	
1401	500	2401	250	Notice of Appeal	
1402	500	2402	250	Filing a brief in support of an appeal	500
1403	1000	2403	500	Request for oral hearing	
1452	500	2452	250	Petition to revive – unavoidable	
1453	1500	2453	750	Petition to revive – unintentional	
1501	1400	2501	700	Utility issue fee (or reissue)	
1502	800	2502	400	Design issue fee	
1460	130	1460	130	Petitions to the Commissioner	
1807	50	1807	50	Processing fee under 37 CFR 1.17 (q)	
1806	180	1806	180	Submission of Information Disclosure Stmt	
8021	40	8021	40	Recording each patent assignment per property (times number of properties)	
1809	790	2809	395	Filing a submission after final rejection (37 CFR § 1.129(a))	
1810	790	2810	395	For each additional invention to be examined (37 CFR § 1.129(b))	
1801	790	2801	395	Request for Continued Examination (RCE)	

Other fee (specify) _____

*Reduced by Basic Filing Fee Paid   SUBTOTAL (3)   ($) 500

4. SEARCH/EXAMINATION FEES

Large Entity		Small Entity			
Fee Code	Fee ($)	Fee Code	Fee ($)	Fee Description	Fee Paid
1111	500	2111	250	Utility Search Fee	
1112	100	2112	50	Design Search Fee	
1113	300	2113	150	Plant Search Fee	
1114	500	2114	250	Reissue Search Fee	
1311	200	2311	100	Utility Examination Fee	
1312	130	2312	65	Design Examination Fee	
1313	160	2313	80	Plant Examination Fee	
1314	600	2314	300	Reissue Examination Fee	
				SUBTOTAL (4)	($) 0

TOTAL FEES ENCLOSED: $500

SUBMITTED BY			Complete (if applicable)		
Name (Print/Type)	Roland A. Fuller III	Registration No. (Attorney/Agent)	31,160	Telephone	(248) 944-6518
Signature				Date	

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

Application Serial No.: 09/801,298

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Atty Dkt No.: 705441US1

JUL 2 7 2006

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.:	09/801,298
Filing Date:	March 7, 2001
Applicant:	Michael J. Mahoney, et al.
Group Art Unit:	3626
Examiner:	V. Frenel
Title:	COMPUTER-IMPLEMENTED VEHICLE REPAIR CLAIMS PROCESSING SYSTEM

Attorney Docket: 705441US1

CERTIFICATE OF FACSIMILE TRANSMISSION (37 CFR 1.8)

Date of transmission: _7/27/2006_ . I hereby certify that this Appeal Brief is being facsimile transmitted to the United States Patent and Trademark Office at fax number 571-273-8300 on the date indicated above.

Susan J. Sidwell	
NAME OF PERSON MAILING PAPER	**SIGNATURE**

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P.O. Box 1450
Alexandria, VA 22313-1450

APPEAL BRIEF - *REVISED*

Sir:

Further to the Notice of Appeal filed June 1, 2006, Applicants submit the following revised Appeal Brief.

This revised Appeal Brief is being submitted as Applicants inadvertently omitted Figure 5 of U.S. Serial No. 60/194128 in its Evidence Appendix (Appendix B) of the Appeal Brief faxed to the Examiner on July 25, 2006.

07/28/2006 BABKAHA1 00000004 031000   09801298
01 FC:1402   500.00 DA

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I.   REAL PARTY IN INTEREST

The real party in interest is DaimlerChrysler Corporation, having a place of business at 800 Chrysler Drive East, Auburn Hills, Michigan 48326 (hereinafter "DCC"). An assignment was recorded in the U.S. Patent and Trademark Office on June 11, 2001 at Reel/Frame: 011651/0808.

II.   RELATED APPEALS AND INTERFERENCES

An appeal is pending in USSN 09/800,697 for a Computer Implemented Vehicle Repair Claims Rules Generator. There are no other appeals or interferences related to the present appeal.

III.   STATUS OF CLAIMS

Claims 1 – 18 are pending in this application. Claims 1 – 18 stand rejected in the final Office Action mailed March 3, 2006. A copy of the claims on appeal is attached as Appendix A.

IV.   STATUS OF AMENDMENTS

There have been no amendments submitted subsequent to the final rejection.

V.   SUMMARY OF THE CLAIMED SUBJECT MATTER

Applicants' invention as claimed in independent claims 1 and 10 is generally directed to a computer-implemented claim processing method (claim 1) and system (claim 10). With reference to the specification, independent claim 1 requires:

A computer-implemented vehicle repair claim processing method having a computer system [computer networked system 34 (Fig. 1), Specification p. 4, lines 2-3] comprising the steps of:

receiving with the computer system repair claim data related to repair of a vehicle [Specification p. 4, lines 8 – 14]

having the computer system determine at least one response to the input repair claim data based upon the received input repair claim data by using

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expert rules stored in a knowledge based system of the computer system [Knowledge based expert system 34 (Fig. 1); warranty rules engine 38 (Fig. 1); Specification, p. 5, lines 15 - 16; 19 - 20; p. 6, lines 15 - 17]

said repair claim expert rules including repair claim-related premises and repair claim-related actions [e.g., rule LB7 shown by reference number 200 in Fig. 3; Specification, p. 2, lines 20, 21; p. 9, lines 21, 22], wherein the computer system uses at least one of the repair claim-related premises to determine whether a preselected repair claim-related action should be executed based on the received repair claim data and generates a claim-related response based on said preselected repair claim-related action [Specification, p. line 20 – p. 3, line 2; p. 4, lines 3 – 6; p. 5, lines 19 - 20], and

having the computer system make said expert rules accessible by a user in a high level computer expression format [Specification, p. 6, lines 6 – 11].

With reference to the specification, independent claim 10 requires:

A computer-implemented vehicle repair claim processing apparatus, comprising [computer networked system 34 (Fig. 1), Specification p. 4, lines 2 - 3]:

a computer system having an input for receiving repair claim data related to repair of a vehicle [e.g., batch claims driver software module 50 (Fig. 1) or interface software 52 (Fig. 1); Specification, p. 4, lines 8 – 14];

claim expert rules stored in a knowledge base of the computer system that the computer system uses to determine at least one response to the input repair claim data based upon the received input repair claim data [warranty rules engine 38, knowledge base system 34 (Fig. 1); Specification, p. 5, lines 15 - 16; 19 - 20; p. 6, lines 15 - 17,

said repair claim expert rules including repair claim-related premises and repair claim-related actions [e.g., rule LB7 shown by reference number 200 in Fig. 3; Specification, p. 2, lines 20, 21; p. 9, lines 21, 22], wherein at least one of the repair claim-related premises uses the received repair claim data to determine whether a preselected repair claim-related action should be executed [Specification, p. 2 lines 21 – 23, p. 4, lines 3 – 6; p. 5, lines 19 - 20];

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said preselected repair claim-related action being used by the computer system to generate a repair claim-related response [Specification, p. 3, lines 1 – 2],

said expert rules being accessible by an user in a high level computer expression format [Specification, p. 6, lines 6 – 11].

VI.   GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The issues in this appeal are:

1.   Whether the Examiner erred in rejecting claims 1 – 18 under 35 U.S.C. § 103(a) as being unpatentable over Borghesi et al. (U.S. Pat. No. 5,950,169, Apte et al. (U.S. Pat. No. 5,970,464) in view of Aquila et al. (U.S. Pat. Pub. 2002/0035488)

VII.   ARGUMENT

1.   **The Examiner erred in rejecting claims 1 – 18 under 35 U.S.C. § 103(a).**

Applicants submit that the Examiner erred in rejecting claims 1 – 18 under 35 U.S.C. § 103(a) as being unpatentable over Borghesi et al. (U.S. Pat. No. 5,950,169, Apte et al. (U.S. Pat. No. 5,970,464) in view of Aquila et al. (U.S. Pat. Pub. 2002/0035488). In making the rejection, the Examiner takes the position:

> As per claim 1, Borghesi and Apte disclose the newly added limitations of "having a computer system", "with the computer system", "having the computer system" (See Borghesi Col. 5, lines 51 – 67)[1]
>
> Borghesi and Apte do not explicitly disclose that the method having "by using expert rules stored in a knowledge based system of the computer system", the computer system uses", based on the received repair claim data and generates a claim-related response based on", "and", "having the computer system make" and "a". However, these features are known in the art, as evidenced by Aquila. In particular, Aquila suggests "by using expert rules stored in a knowledge based system of the computer system", "the computer system uses", "based on the

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[1] These limitations were added not to overcome a prior art rejection but to address the Examiner's rejection under 35 U.S.C. § 101 in the Official Action mailed June 21, 2005 that these claims were directed to non-statutory subject matter because they failed the now rejected test of "not within the technological arts". *See, Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility*, OG 22 November 2005, Annex III (A), citing *Ex Parte Lundgren*, 76 U.S.P.Q.2d 1385 (BPAI 2005).

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received repair claim data and generates a claim-related response based on", "and", "having the computer system make" and "a" (See Aquila, Page 7, Paragraphs 0125 – 0131). [Official Action mailed March 3, 2006, Section 4(A).

Claims 1 and 10 are the independent claims. They each require that the computer system uses expert rules stored in a knowledge based system to determine at least one response to input repair claim data based upon received input repair claim data where the computer system uses at least one repair claim-related premise to determine whether a preselected repair claim-related action should be executed based on received repair claim data. The Examiner, acknowledging that neither Borghesi et al or Apte et al. disclose these limitations, takes the position that such features are known in the art, citing to Aquila. More specifically, the Examiner cites to Paragraphs 0125 – 0131 of Aquila.

Applicants submit Aquila neither discloses these limitations, nor are these sections of Aquila available as prior art. Aquila is directed to a system and method of administering, tracking and managing of claims processing. Paragraphs 0125 – 0131 of Aquila discuss the use of business rules. And these business rules are those that are designated and/or approved by an insurance carrier responsible for paying the claim. As described in Aquila:

> Business rules utilized by sub-systems of the system 30 are designated and/or approved by the insurance carrier and can be updated and modified. In one embodiment, the business rules applied by sub-systems described above are stored in the data layer 219. In another embodiment, each set of business rules utilized by each sub-system of the system 30 are incorporated into the sub-systems at the application layer 213 and comprise a business rules engine component of each sub-system. The general concept of business rules will be known to persons of ordinary skill in the art. The specific rules used to accomplish the functionality described herein, contain content specific to implementation of this invention. In one embodiment, business rules incorporated in business rules engines are also designated or approved by the insurance carrier and can be updated and modified. [Aquila, Par. 0129]

There is no discussion of, and thus applicants submit that Aquila fails to disclose, that the business rules are expert rules, or that they are stored in a knowledge based system of the computer

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system, as required by claims 1 and 10. Further, there is no discussion of a repair claim-related premise or using a repair claim related-premise to determine whether a preselected repair claim-related action should be executed based on received repair claim data. Thus applicants submit that Aquila fails to disclose the limitations required by claims 1 and 10 that the computer system uses at least one repair claim-related premise to determine whether a preselected repair claim-related action should be executed based on received repair claim data. Applicants submit that claims 1 and 10 are thus allowable over Borghesi et al. in view of Apte et al. and Aquila et al.

Applicants further submit that the sections of Aquila relied upon by the Examiner are not available as prior art. Aquila et al, a published patent application, was filed April 3, 2001, almost one month after the March 7, 2001 filing date of the present application. Aquila et al. claims the benefit of a provisional patent application filed April 3, 2000 (USSN 60/194,128). Thus, it is only what is disclosed in this provisional patent application that is available as prior art under 35 U.S.C. § 102(e).

Applicants have attached a copy of USSN 60/194,128 ("'128 Prov. App.") in the Evidence Appendix. As can be seen from this copy, USSN 60/194,128 does not include the text of Pars. 0125 – 0131 of the published Aquila et al. patent application. And in this regard, the '128 Prov. Appl. references to "business rules" make clear that these rules are the rules imposed by the insurance carrier responsible for paying the claim that are used by the claim processor. These references to "business rules" in the '128 Prov. App. that applicants have found are as follows:

> Business rules module 165c uses parameters entered by an insurance carrier through its client software 151 interface to control the application layer 165 for system 30 communication with the consumer. ['128 Prov. App., p. 5, lines 31 – 33]

> The business rules module 165c generates an e-mail notification to the service provider's personal computer 2 indicating approval of the estimate. ['128 Prov. App., p. 8, lines 36 – 38

> At step 336, the receipt of the revised claim data by application server 50 initiates business rules module 165c, which generates an e-mail notification to the

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service provider's personal computer 2 indicating approval or rejection of the estimate. ['128 Prov. App., p. 9, lines 13 – 15]

At step 427, before the Claims/Estimates 180c data can be sent to the insurance carrier's system 65 the business rules 165c check the police report 180g data to determine if the report specific to this claim is available. ['128 Prov. App., p. 13, lines 5 – 8]

At step 430, if the police report is not available the business rules module 165c initiates the police report acquisition process, as detailed in FIG. 5. ['128 Prov. App., p. 13, lines 9, 10]

The business rules module 165c generates an e-mail notification to the repair facility personal computer 2 indicating approval of the estimate. [['128 Prov. App., p. 13, lines 19, 20]

At step 442, the receipt of the revised claim data by application server 50 initiates business rules module 165c, which generates an e-mail notification to the repair facility personal computer indicating approval or rejection of the estimate. ['128 Prov. App., p. 13, lines 34 – 36]

For each financial transaction, the financial module 165d formats and stores invoice and payment documentation in the financial 180e database in conformity with carrier requirements, as specified by the business rules model 165c. [['128 Prov. App., p. 14, lines 5 - 7]

At step 537, the system 30 executes the stored procedure on a predetermined time schedule, attaching any identified correlated insurance Claims/Estimates 180c datafiles and police reports, if a police report is required by business rules model 165c. ['128 Prov. App., p. 16, lines 38 - 40]

Applicants submit that the above references to "business rules" in the '128 Prov. App. fail to disclose that the business rules are expert rules. They further fail to show any repair claim-related premise that is used to determine whether a preselected repair claim-related action should be executed based on received repair claim data.

C claims 1 and 10 further require that the claim expert rules are accessible by the user in a high level computer expression format. The Examiner, in the Official Action mailed June 21, 2005 but not in the Final Official Action mailed March 3, 2006, cited Borghesi Col. 7, lines 54 – 67 to col. 8, lines 2 as disclosing this limitation. Applicants respectfully submit that it does not. This section of Borghesi et al. discloses a graphic user interface that allows an authorized user to control

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claims processing work flow for one or more insurance datafiles. This GUI permits a user to enter and retrieve information from a datafile, execute tasks involved in claims processing such as manipulating a plurality of claim datafiles, opening specific claim data file and working on estimate calculations or corresponding related to the open file. The GUI also provides for communicating with repair facilities and insurance company staff. There is, however, no discussion that the GUI makes repair expert claim rules available to a user, let alone in a high level computer expression format. While this section does discuss that the GUI can be constructed using known software tools and languages such as VISUAL C++, RATIONAL ROSE and IBM CUA Library, this deals with the programming language used to program the GUI, not making claim expert rules accessible to a user.

The remaining claims, claims 2 – 9 and 11 – 18, depend directly or indirectly from one of claims 1 and 10, and are allowable for at least that reason.

3.   Conclusion

In conclusion, for the reasons discussed above, Applicants submit that the rejections of claims 1 – 18 under 35 U.S.C. § 103(a) are in error. Applicants respectfully request reversal of these rejections.

VIII.   CLAIMS APPENDIX

A copy of each of the claims involved in this appeal, namely claims 1 – 18, is attached hereto as Claims Appendix.

IX.   EVIDENCE APPENDIX

A copy of provisional application USSN 60/194,128 is attached hereto as Evidence Appendix.
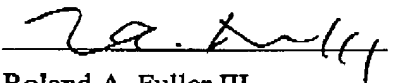
X.   RELATED PROCEEDINGS APPENDIX

Application Serial No.: 09/801,298   Atty Dkt No.: 705441US1

None

Respectfully submitted,

Roland A. Fuller III
Reg. No. 31,160
Harness, Dickey & Pierce P.L.C.

Dated: _July 27, 2006_

RALPH E. SMITH, JR.
DAIMLERCHRYSLER INTELLECTUAL CAPITAL COMPANY, LLC
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CLAIMS APPENDIX
(Appendix A)

1.   A computer-implemented vehicle repair claim processing method having a computer system, comprising the steps of:

receiving with the computer system repair claim data related to repair of a vehicle;

having the computer system determine at least one response to the input repair claim data based upon the received input repair claim data by using expert rules stored in a knowledge based system of the computer system,

said repair claim expert rules including repair claim-related premises and repair claim-related actions, wherein the computer system uses at least one of the repair claim-related premises to determine whether a preselected repair claim-related action should be executed based on the received repair claim data and generates a claim-related response based on said preselected repair claim-related action , and

having the computer system make said expert rules accessible by a user in a high level computer expression format.

2.   The method of claim 1 wherein the repair claim data includes dealer involved in the repair, vehicle identification number of the vehicle to be repaired, parts involved in the repair, and labor operation data.

3.   The method of claim 1 further comprising the steps of:

having the computer system access a database to retrieve information related to the vehicle to be repaired.

4.   The method of claim 1 further comprising the steps of:

having the computer system evaluate a repair claim by using a plurality of repair claim-related expert rules to evaluate a repair claim;

having the computer system determine that at least one of the rules requires additional data related to the repair;

having the computer system access a database to retrieve the additional data.

A - 1

5.   The method of claim 1 wherein the repair claim data includes dealer involved in the repair, vehicle identification number of the vehicle to be repaired, parts involved in the repair, and labor operation data,

said labor operation data being indicative of the labor involved in the repair,

said method further comprising the steps of:

having the computer system use a plurality of repair claim-related expert rules to evaluate a repair claim;

having the computer system determine via the repair claim-related expert rules that an inconsistency exists based upon the data regarding parts involved in the repair and based upon the labor operation data.

6.   The method of claim 5 wherein the repair claim data includes warranty data related to the repair, said method further comprising the steps of:

having the computer system use the plurality of repair claim-related expert rules to evaluate the warranty data related to the repair; and

having the computer system provide a response to a user that is indicative of whether the repair is covered by warranty based upon evaluation by the repair claim-related expert rules.

7.   The method of claim 1 further comprising the steps of:

having the computer system use a lower level representation of the repair claim-related expert rules when the at least one of the repair claim-related premises uses the received repair claim data to determine whether a preselected repair claim-related action should be executed; and

having the computer system display to the user the high level computer expression format of the repair claim-related expert rules.

8.   The method of claim 7 wherein the high level computer expression format of the repair claim-related rule is an English phrase, wherein the lower level representation of the repair claim-related rule is at least one line of programming code.

9.   The method of claim 8 wherein the programming code is C++ programming

A - 2

Application Serial No.: 09/801,298   Atty Dkt No.: 705441US1

code.

10.   A computer-implemented vehicle repair claim processing apparatus, comprising:

a computer system having an input for receiving repair claim data related to repair of a vehicle;

claim expert rules stored in a knowledge base of the computer system that the computer system uses to determine at least one response to the input repair claim data based upon the received input repair claim data,

said repair claim expert rules including repair claim-related premises and repair claim-related actions, wherein at least one of the repair claim-related premises uses the received repair claim data to determine whether a preselected repair claim-related action should be executed;

said preselected repair claim-related action being used by the computer system to generate a repair claim-related response,

said expert rules being accessible by an user in a high level computer expression format.

11.   The apparatus of claim 10 wherein the repair claim data includes dealer involved in the repair, vehicle identification number of the vehicle to be repaired, parts involved in the repair, and labor operation data.

12.   The apparatus of claim 10 further comprising:

a database from which the computer system retrieves information related to the vehicle to be repaired.

13.   The apparatus of claim 10 wherein the computer system uses a plurality of repair claim-related expert rules evaluate a repair claim;

wherein at least one of the rules requires additional data related to the repair to evaluate the repair claim;

wherein the computer system retrieves the additional data from a database.

A - 3

14.   The apparatus of claim 10 wherein the repair claim data includes dealer involved in the repair, vehicle identification number of the vehicle to be repaired, parts involved in the repair, and labor operation data,

said labor operation data being indicative of the labor involved in the repair,

wherein the computer system uses a plurality of repair claim-related expert rules, the data regarding parts involved in the repair and the labor operation data to evaluate a repair claim to

determine whether an inconsistency exists.

15.   The apparatus of claim 14 wherein the repair claim data includes warranty data related to the repair, wherein the computer system uses the plurality of repair claim-related expert rules to evaluate the warranty data related to the repair; and

wherein the computer system provides a response to a user that is indicative of whether the repair is covered by warranty based upon the computer's evaluation using the repair claim-related expert rules.

16.   The apparatus of claim 10 wherein the computer uses a lower level representation of the repair claim-related expert rules when the at least one of the repair claim-related premises uses the received repair claim data to determine whether a preselected repair claim-related action should be executed; and

wherein a computer terminal displays to a user the high level computer expression format of the repair claim-related expert rules.

17.   The apparatus of claim 16 wherein the high level computer expression format of the repair claim-related rule is an English phrase and the lower level representation of the repair claim-related rule is at least one line of programming code.

18.   The apparatus of claim 17 wherein the programming code is C++ programming code.

A - 4

Application Serial No.: 09/801,298   Atty Dkt No.: 705441US1

EVIDENCE APPENDIX

(Appendix B)

Copy of USSN 60/194,128 attached.

B

4-4-00

A/PROV

Please type a plus sign (+) inside this box → ☐

PTO/SB/16 (2-98)
Approved for use through 01/31/2001   OMB 0651-0037
Patent and Trademark Office, U S DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

+

PROVISIONAL APPLICATION FOR PATENT COVER SHEET
This is a request for filing a PROVISIONAL APPLICATION FOR PATENT under 37 CFR 1.53 (c).

INVENTOR(S)		
Given Name (first and middle [if any])	Family Name or Surname	Residence (City and either State or Foreign Country)
ANTHONY	AQUILA	Santa Rosa, California

☐ Additional inventors are being named on the ___ separately numbered sheets attached hereto

TITLE OF THE INVENTION (280 characters max)
A SYSTEM AND METHODS FOR ADMINISTERING, TRACKING AND MANAGING CLAIMS PROCESSING

CORRESPONDENCE ADDRESS

Direct all correspondence to:

☐ Customer Number

Type Customer Number here

→ Place Customer Number Bar Code Label here

OR

[X] Firm or Individual Name	BROWN & WOOD, LLP C/O RONIT GILLON
Address	One World Trade Center
Address	
City	New York	State	New York	ZIP	10048
Country	New York	Telephone	212-839-5300	Fax	212-839-5599

ENCLOSED APPLICATION PARTS (check all that apply)

[X] Specification Number of Pages	17	☐ Small Entity Statement
[X] Drawing(s) Number of Sheets	5	☐ Other (specify)

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Respectfully submitted.

SIGNATURE _____   Date 0403 / 00
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TELEPHONE   Docket Number DT-3423

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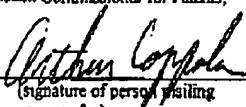
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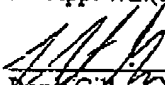Applicant   : Anthony Aquila

Title   : A SYSTEM AND METHODS FOR
                               ADMINISTERING, TRACKING AND
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(X) 2. Specification (17 pages)

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Respectfully submitted
for Applicant(s)

Ronit Gillon
Reg. No. 39,202

DT-3423

A SYSTEM AND METHODS FOR ADMINISTERING,

TRACKING AND MANAGING CLAIMS PROCESSING

DETAILED DESCRIPTION OF THE PRESENTLY PREFERRED EMBODIMENTS

The present invention provides a new and improved system and methods of administering, tracking and managing claims processing. More particularly, the system and method processes, tracks and releases funds for claims made upon insurance policies and similar risk shifting mechanisms including but not limited to self insurance, indemnity provisions and surety and performance bonds. The overall system for practicing the methods is shown in the system architecture of FIG. 1. The elements depicted on FIG. 1 include the computer systems, network connections and other communication devices that constitute the preferred physical embodiments to implement the invention. It is understood, however, that the system is not limited to the mentioned devices and additional and alternative devices may be supported by the system.

As shown in FIG. 1, a user interacts with system 30 through input/output devices 1 ("I/O devices"). These I/O devices include but are not limited to personal computer 2, wireless device 5, embedded device 10 and telephone 15.

Personal computer 2 may be an IBM compatible computer, a Macintosh computer or any other system capable of running client software such as a Web Browser ("Web Browser"). Personal computer 2 preferably runs a Web Browser such as Netscape's Navigator or Microsoft's Internet Explorer to communicate information to and from system 30. Personal computer 2 is connected to a communication network 25, such as the Internet, using a fast connection, such as DSL, cable modem, wireless, modem, etc. Personal computer 2 includes an output device, such as a monitor or other display and a speaker or printer (e.g., printer device 3). Personal computer 2 also includes an input such as a keyboard or pointing device (e.g., mouse, track ball, pen device, microphone, joy stick, game pad, satellite dish, scanner or the like) or both to enable the user to input information.

Wireless device 5 may include but is not limited to a communication device that a user carries and uses to enter and obtain information pertinent to the process. The wireless infrastructure that connects the device with the communication network 25 uses existing wireless signal receiving systems 20 similar to the communication methods used by 3Com's Palm Pilot VII.

Embedded device 10 may include but is not limited to a communication device embedded in the insured object, such as a vehicle or a home, that is capable of detecting, recording and transmitting to system 30 the information on the casualty that initiates a claim. Embedded device 10 preferably communicates the casualty information through wireless signal receiving systems 20 using a wireless device. Embedded device 10 may also transmit the casualty information through other communication lines such as telephone 15.

Personal computer 2, wireless device 5 and embedded device 10 transmit requests and responses to system 30 through communication network 25 using standard protocols, such as XML, HTTP or the like. It is understood, however, that the system 30 is not limited to the mentioned standard protocols and alternative standard protocols may be supported by the system 30.

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When telephone 15 is used as an interface to system 30, telephone 15 transmits signals to telephony server 41. Telephony server 41 includes the necessary software to recognize speech and convert it to a standard text format such as XML or the like that can be sent to Web server 45.

The messages sent and received by the I/O devices 1 are in standard protocols when they are received by load balancers 40 and web servers 45. The preferred standard protocols include but are not limited to HTTP and XML protocols that are capable of being encrypted by Secure Socket Layer ("SSL"), Virtual Private Network ("VPN") protocol or similar encryption systems.

Preferably, the components in system 30 offer the highest performance, scalability and reliability. To provide these characteristics, the preferred platform could be, but is not limited to, Sun Microsystems hardware running the Solaris operating system.

Standard encryption mechanisms are used to ensure the confidentiality of data. When confidential data is transported between I/O devices 1 and system 30 or between external partner systems 62 and system 30, encryption systems (i.e., SSL or VPN or the like) may be used to protect the data.

Firewalls 35, 60, 69, 79, 88 and 93 ("firewalls") are specialized hardware and software components that filter requests traveling in and out of systems 30, 65, 75, 85 and 90 respectively. Preferably, the firewalls are manufactured by Cisco Systems or the like.

Firewall 35 is configured to accept only certain user request types preventing undesired requests from being forwarded from communication network 25 to system 30.

Web servers 45, 66, 76 and 89 include but are not limited to servers running a Web server application. Preferably, such servers are provided by Netscape Enterprise, Apache or similar software.

Firewall 35 sends requests to load balancer 40, which distributes such requests to one of the Web servers 45 in the Web Server farm. Web server 45 then forwards the request to application server 50 where a software application performs the appropriate business logic to satisfy the request. As part of the required business logic, the application accesses data stored in database server 55.

Database server 55 runs a relational database management system (RDBMS), such as Oracle 8i or the like. The RDBMS software running in server 55 manipulates the data and sends the appropriate information to application server 50.

Application server 50 may be, but is not limited to, a Java based server providing scalability and reliability to the application. The application runs on top of application server software, such as BEA System's WebLogic or the like.

The information required to complete the response to the request may not only require data from database server 55, but also data from one of the external partner systems 62. In this

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case, application server 50 sends a request to one of the external partner systems 62 via a secure communications medium 61, such as, privately leased lines or the like. These external partner systems 62 include insurance carrier's system 65, supplier system 75, police report system 85, trust/bank system 90 and any other external systems necessary to implement the present invention. The preferred format for the sent request is standard XML format, although other formats may be supported by system 30.

A Computer running the adapter software running in systems 67, 77, 86 or 91 translates the XML request to the format required by the insurer's system, such as legacy systems 68, 78, 87 or 92. Once legacy systems 68, 78, 87 or 92, respectively retrieve or update the data inside their data stores, information is sent back to adapter 67, 77, 86 or 91, which translates the message to XML and sends it back to application server 50.

Legacy systems 68, 78, 87 or 92 include but are not limited to existing systems that the external partners use to store and process the data they use to perform their business. It is understood that insurer systems other than legacy systems may be used.

Application server 50 builds a response preferably in HTML or XML formats and sends it back to the I/O devices 1 that initiated the request. For example, in the case of a personal computer 2, the message transmitted to a Web Browser is an HTML message using the HTML protocol. In the case of the embedded device 10 and wireless device 5, the message is in XML format over HTTP or HTTPS. In the case of telephone 15, the message is an XML message ready to be converted into audible speech by telephony server 41.

FIG. 2 depicts the logical components that comprise the application software used to implement the present invention. The application is designed using an object oriented and multi-tier approach to provide flexibility and ease of integration with external partner systems 62 and also to allow future modifications to the system 30. It is understood, however, that the system 30 is not limited to the mentioned logical components and additional and alternative logical components may be supported by the system 30

As shown in FIG. 2, the system 30 uses various user interfaces 150, including client software 151, voice based interface 152 and wireless interface 153. This layer corresponds to the I/O devices 1 in FIG. 1.

The client software 151 runs in a client machine such as personal computer 2 and has all the display and communication logic necessary to send and receive messages to and from the system 30 via communications network 25. The preferred client software 151 is a Web Browser.

The voice based interface 152 enables a user using telephone 15 to communicate with system 30.

The wireless interface 153 enables a user using a wireless device 5 to communicate with system 30. The wireless interface 153 may also include an embedded device 10.

The application layer 165 may be hosted in application servers 50. All communications between the application layer 165 and the external partner systems 62 are accomplished using enterprise application interface 170 ("EAI") software. The EAI 170 software manages message

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delivery and transaction integrity. Such EAI 170 software may be purchased from Active Software or the like. The data to be communicated is converted into a standard format such as XML or the like by EAI 170. Adapter software 171 (residing in adapter machines 67, 77, 86 and 91 in FIG. 1) can convert the standard format to the format required by external partner system 62.

Data layer 180 provides the ability to store, update and access data in an efficient and organized manner. Preferably, the functionality of data layer 180 is provided by a RDBMS such as Oracle 8i or the like. The data in data layer 180 includes, but is not limited, to the following categories:

Customer 180a comprising customer data including name, address, policy information, transactions, preferences and the like;

Product 180b comprising product data including catalog information, price, description, technical information and the like;

Claims/Estimates 180c comprising claim data including estimates, photos, status, loss reports and the like;

Service providers 180d comprising service provider data including name, address, certifications, business partners and the like;

Financial 180e storing a record of all financial transactions managed by system 30;

CSI 180f comprising the customer satisfaction index ("CSI") data generated by consumers' questions and answers provided in response to a customer satisfaction survey, as well as other CSI information on the service provider, supplier and other business providing service for a given industry;

Police report 180g comprising police report data including the description of the casualty, name of the claimant, name of the officer and the like; and

Industry directory 180h comprising industry data including data on the businesses participating in a given industry with special emphasis being placed on the service providers' information.

Application layer 165 comprises several modules and engines including application software programs for performing various functions within application server 50, including but not limited to user authentication module 165o, audit module 165a, translation engine 165b, financial module 165d, claims module 165h, business rules module 165c, escrow engine 165e, workflow engine 165i, CSI engine 165g, e-commerce module 165f, industry directory module 165j, auction module 165k, voice recognition module 165l, reporting module 165m and data mining module 165n.

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The user authentication module 165o provides security control to the system 30. User authentication module 165o controls what part of the application the user is authorized to access. User authentication module 165o requires the user to provide a valid user Id and password combination. The user authentication information is, preferably, stored on data layer 180, but it can also be stored on the external partner systems 62, if required by any external partner.

The audit module 165a provides detailed fraud detection algorithms that assess the estimate submitted from the service provider using I/O devices 1 to system 30. The audit module 165a component is also responsible for delivering the audited estimate to the insurance carrier's system 65. The insurance carrier that uses the system 65, to which the audit module 165a sends an estimate, provides the parameters for the algorithm. These insurance carrier provided parameters are stored in data layer 180d. The audit module 165a also checks for duplicate claims sent to multiple carriers and detects likely fraud candidates based on actuarial analysis of claims data. The audit module 165a also flags estimates for potential fraud review by tying system 30 to external partner systems 62, such as credit card fraud detection systems.

The translation engine 165b, preferably, receives an estimate in a proprietary format from personal computer 2 using a Web Browser 151, or the like. Translation engine 165 then converts the received format into a universal format and sends it to the audit module 165a. If the estimating software does not provide a facility to save an estimate to a file, client software 151 in personal computer 2 is used to extract an estimate from the estimating software. Client software 151 transmits the estimate to the application layer 165 using the same mechanisms described in FIG. 1 for the communication of information from personal computer 2 to system 30.

The financial module 165d manages the payments based on input from the escrow engine 165e and the workflow engine 165i and records and controls the transactions that have financial implications. In other words, financial module 165d tracks the revenue generated and costs incurred by the transactions flowing throughout the system 30.

Claims module 165h manages all claim-related services and data. Claims module 165h builds a comprehensive claims record including repair facility estimates and photos, parts and materials, vendor data, contracted labor data, trust account information, approvals and payment history, post repair reports and photos, consumer satisfaction reports and warranty data. This data is stored in the Claims/Estimates 180c database.

Business rules module 165c uses parameters entered by an insurance carrier through its client software 151 interface to control the application layer 165 for system 30 communication with the consumer. For example, an insurance carrier may want to display certain policy information to a consumer that other carriers may choose not to display.

Escrow engine 165e manages the authorization and communication with the trust account 90 to make payments based on initial approval of the service provider's estimate and the attainment of milestones throughout the workflow process as indicated by the workflow engine 165i. This escrow engine 165e also flags and escalates exceptions in the process.

Workflow engine 165i provides an interface for the service provider (preferably a wireless interface 153) to enter ongoing service status and post the service status to be viewed by

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trading partners and consumers. Workflow engine 165i also communicates with escrow engine 165e to facilitate the timely transfer of funds based on attainment of milestones in the process. The service provider predefines the milestones to be considered using the client software 151 at the service provider's personal computer 2.

CSI engine 165g uses both structured data (questions with predefined possible answers including multiple choice answers) and unstructured data (questions to be answered using free text). Such data is gathered by the system 30 from the consumer to generate a Customer Satisfaction Index ("CSI") 180 for the service providers. When the claim services are completed, the consumer completes the consumer satisfaction survey via a client software 151 interface or a voice based interface 152.

E-commerce module 165f provides the facilities necessary to receive and send electronic orders and payments between service providers and suppliers.

Industry directory module 165j provides a consumer with an interface to select service providers. Module 165j includes extensive information on the service providers, such as maps, services, virtual facility tour, CSI index and information specific to an insurance carrier, such as preferred service provider status.

Auction module 165k provides an auction area for service providers and suppliers to exchange parts, supplies and materials at market value.

Voice recognition module 165l translates voice to data format to be provided to other modules and engines of the application layer 165. Voice recognition module 165l also translates data provided by other modules and engines of the application layer 165 into voice to provide a user at telephone 15 with appropriate feedback through the voice based interface 152.

Reporting module 165m summarizes and formats data for various users to view through a client software 151 interface. The reporting module 165m includes software provided by Crystal reports and the like to facilitate the creation of the reports.

Data mining module 165n provides data analysis tools such as Brio and the like. Information gathered in system 30 is used to detect trends for marketing and to detect fraud. For example, by analyzing the information on the service providers one could identify certain workflow patterns that indicate the need for a particular product or solution.

Preferably, system 30 is replicated in different locations and data is synchronized between the different locations to provide the highest level of reliability.

The methods for practicing the present invention are disclosed in FIGS. 3, 4 and 5. FIG. 3 illustrates a general insurance claim processing method in accordance with the present invention. A consumer using any of the I/O devices 1 communicates with the system 30 via the global communication network 25. The consumer may use any of the I/O devices 1 depicted in FIG. 1. Preferably, the consumer communicates with the system 30 using a client software 151 on the consumer's personal computer 2. It is this embodiment that is used to describe the method of FIG. 3. It is, however, understood that the method can be practiced using systems other than system 30.

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At step 300, a consumer (insured or claimant) initiates the claims process using an I/O device 1. Preferably, the process is initiated via the insurance carrier's system 65 but it could also be initiated directly with the system 30.

At step 303, the consumer commences the first notice of loss ("FNOL") process by selecting the FNOL menu option or link from the insurance carrier's system 65.

At step 306, the insurance carrier's system 65 retrieves the consumer's profile information including policy and coverage data from the carrier's legacy system 68 and forwards that data via a secure communication medium 61 to the system 30. This enables the system 30 to pre-populate the Claims/Estimates 180c data fields from the database server 55 on the FNOL screen relating to insured vehicles, drivers, and coverage which facilitates processing the claim with accurate and relevant data.

At step 309, the insurance carrier's system 65 forwards the consumer's I/O device 1 via the communication network 25 to the claims module 165h of the system 30, which is co-branded with the insurance carrier's identity. The insurance carrier's system 65 data fields that were transferred in step 306 are mapped at the system 30's application layer 165 to database server 55's Claims/Estimates 180c data fields and forwarded to the consumer's I/O device 1 for the consumer's review.

At step 312, the consumer completes FNOL on his or her I/O device 1 by answering a series of claim related questions retrieved by the Claims/Estimates module 180c from database server 55 and submitting the replies to the questions via the communication network 25 to the Claims/Estimates 180c database. The claims module 165h branches questions based on business rules module 165c that require additional questions to be completed. For example, the automobile claim will have questions relating to bodily injury. If the consumer answers in the affirmative, there will be additional questions to provide detail about the injured parties and the sustained injuries.

At step 315, in the preferred FNOL process, the consumer selects appropriate service providers using their I/O device 1 (e.g., automobile claim selects repair facility, worker's compensation claim selects medical service provider, etc.). As part of the FNOL screen, the consumer is offered the option of choosing the link or icon to select a service provider. This option transfers the consumer's client software 151 view to the industry directory 165j listing of industry related service providers. The FNOL, however, can be submitted without service provider selections in the event that the consumer has already made service provider choices outside the FNOL process or does not wish to make a selection at that point.

At step 316, the completion of steps 312 and 315 result in the system 30 retrieving the consumer's claim data 180c and transmitting it via the communication medium 61 to the insurance carrier's system 65.

Similarly, at step 318, the completion of steps 312 and 315 result in the system 30 retrieving the consumer's claim data from Claims/Estimate 180c database and transmitting it via the global communication network 25 to the service provider's personal computer 2 (other service providers that were selected are signaled in the same manner). The data includes any

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available detail that facilitates the provider in performing their task (e.g., for an automobile claim the repair facility receives vehicle and damage information, a worker's compensation claim includes patient and injury detail).

At step 320, the consumer and service provider communicate via their respective I/O devices 1 to schedule an appraisal appointment. Preferably, the consumer uses his or her I/O device 1 to access the scheduling feature of the claims module 165h at the application layer 165. Alternatively, the consumer may elect to contact the service provider directly via telephone 15. The service provider then uses its I/O device 1 to review and update its schedule via the claims module 165h.

The appointment occurs at the appropriate location. The service provider determines the extent of service required to satisfy the claim. An estimate for the services and associated costs is generated using third party estimation software on the service provider's personal computer 2 (e.g., for an automobile claim the repair facility will use an estimation tool such as those provided by ADP, CCC, and Mitchell), or other tools available to the service provider.

At step 321, the data is submitted online to the application server 50 of system 30 using the service provider's personal computer 2. Preferably, the estimate is saved to a claims datafile on the service provider's I/O device 1 and the same I/O device 1 forwards the estimate to the system 30 via communication network 25 using client software 151.

At step 323, once the service provider estimate is on the application server 50, it is converted from the format used by the third party estimation software, or other tool, into a universal format by the system 30's translation engine 165b.

At step 324, the translated estimate is passed to the audit module 165a, which applies insurance carrier specific parameters and comprehensive trending analysis to flag any inconsistencies and prevent irregular practices by the service provider (e.g., for an automobile claim this includes but is not limited to checks against local market labor rates and charges, evaluation of the estimate relative to the industry's best business practices, decoding of VIN to ensure selection of accurate parts, generation of reports detailing savings opportunities and summarizing line by line cost variances). The translated and audited estimate is stored on the Claims/Estimates 180c.

At step 327, the claim data is transferred in its universal format to the carrier's adapter 67, via the communication medium 61, where it is converted from the universal format to the carrier's preferred format and stored in the carrier's legacy system 68.

At step 330, if the service provider's estimate data was approved by step 327, the escrow engine 165e authorizes the trust account stored on the Trust/Bank system 90 to make payments against the insurer's chosen financial instrument (e.g., line of credit). The escrow engine 165e signals the financial module 165d of the system 30 to manage payments. The business rules module 165c generates an e-mail notification to the service provider's personal computer 2 indicating approval of the estimate. The e-mail will contain a hyperlink back to the system 30 so that the service provider's personal computer 2 can view the Claims/Estimates 180c data.

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If the estimate was not approved by step 327, the carrier's legacy system 68 signals the insurance carrier's system 65 or sends an e-mail to an adjuster at the carrier company to review the data.

At step 333, the adjuster retrieves the claim information from the carrier's legacy system 68 and views the claim information using his or her I/O device 1. The adjuster may modify the claim or estimate data and determines whether the estimate is approved or not. The adjuster's ruling and any modifications to the claim data are saved to the carrier's legacy system 68 and transmitted from the insurance carrier's system 65 to system 30's database server 55 via the secure communication medium 61. The transaction is the reverse of step 327, in particular, the claim data is converted into its universal format using the carrier's adapter 67 and transmitted over the communication medium 61 to the system application server 50 and saved to the database server 55.

At step 336, the receipt of the revised claim data by application server 50 initiates business rules module 165c, which generates an e-mail notification to the service provider's personal computer 2 indicating approval or rejection of the estimate. The e-mail notification contains a hyperlink back to the system 30 so that the service provider's personal computer 2 can view the updated Claims/Estimates 180c data.

At step 339, once the claim has been approved as indicated in step 336, the escrow engine 165e notifies the financial module 165d that payments are authorized.

At step 342 the service provider begins to fulfill the claim-related services. The system 30 ties the payment path with the delivery of these services, as described in step 348 which follows. For each financial transaction, the financial module 165d formats and stores invoice and payment documentation in the financial 180e database in conformity with carrier requirements, as specified by the business rules module 165c.

At step 351, the service provider procures any required materials, supplies, and/or services, preferably, online using their I/O device 1 (e.g., in an automobile claim this includes the repairing and/or ordering of parts). The service provider uses their client software 151 to access the system 30's e-commerce module 165f marketplace or auction module 165k, both residing on the application server 50. The service provider can order or bid for materials and services, respectively.

At step 345, the system 30 financial module 165d determines if the service provider is a trusted trading partner by using the service provider specific data from the system 30's service provider 180d database.

At step 348, when the service provider is trusted, the financial instrument (such as a trust account or credit instrument) on the Trust/Bank system 90 is activated to pay portions of the total claim on a continuum that is stipulated by the escrow engine 165e to match the progress of the service. When the service provider is not trusted, the trust account tracks progress of the repair for storing status tracking data as part of the claim object of Claims/Estimates 180c database. The service provider using its I/O device 1 provides service updates to system 30. Preferably, the service provider uses client software 151 to access only its claim-related records from the

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database server 55. Alternatively, client software 151 extracts workflow data from a third party workflow application on the service provider's personal computer 2.

At step 354, the service provider accepts and validates the completion of the materials and services transaction when all parts, materials, supplies are received and/or sub-services are completed. The validation is provided by the service provider's personal computer 2 to the escrow engine 165e via its client software 151.

At step 357, when the transaction is validated, the escrow engine 165e signals the financial module 165d to issue payments of Trust/Bank funds to the vendor/sub-service provider. The financial record stored on the financial database 180e and the account on the Trust/Bank system 90 are updated to reflect this payment. The issuance of payment is based on payment terms for the specific vendor, as indicated in the financial module 165d.

At step 360, the database record for the service provider is retrieved from service provider 180d database to determine if the service provider is trusted.

At step 363, if the service provider is trusted, the escrow engine 165e signals the financial module 165d to pay the service provider its profit margin on the purchase/sub-service concurrent with the vendor/sub-service payment. The payment is made from the account on the Trust/Bank system 90.

At step 366, the service provider completes the required services. Any completed purchase/sub-service has been noted in the claim file. Status updates and any additional details are provided by the service provider during service using their I/O device 1 and stored as part of the Claims/Estimates 180c data on the data base server 55.

At step 369, when the claim services are completed, the consumer completes the consumer satisfaction survey. Preferably, the consumer uses his or her I/O Device 1 to review the customer satisfaction survey questions stored in CSI 180f that are retrieved by the CSI engine 165g. Alternatively, the consumer completes a paper version of the survey and sends that to a data entry group that uses I/O devices 1 to forward the responses to the CSI engine 165g for storage in the CSI 180f database on the database server 55.

The results of the consumer satisfaction survey are retrieved from the data server 55 and compiled by the CSI engine 165g. The CSI engine 165g utilizes an algorithm to generate a composite index for the survey and updates the overall index for that service provider in an entry to industry directory 180h incorporating the new result. The resulting overall CSI index is displayed by the industry directory module 165j the next time the service provider's data in industry directory 180h is accessed from the system 30's data layer 180.

At step 372, once the consumer satisfaction survey is completed, the escrow engine 165e authorizes the financial module 165d to release the remaining balance of the claim amount to the service provider from the account on the Trust/Bank system 90.

If the service provider is trusted, any remaining amount is paid.

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If, however, the service provider is not trusted, the total claim (less cost of purchases/sub-services) is paid from the account on the Trust/Bank system 90.

FIG. 4 illustrates an automobile insurance claim method in accordance with the present invention. The consumer may use any of the I/O devices 1 depicted in FIG. 1. Preferably, the consumer communicates with the system 30 using a client software 151 on the consumer's personal computer 2. It is this embodiment that is used to describe the method of FIG. 4. It is, however, understood that the method can be practiced using systems other than system 30.

At step 400, a consumer (insured or claimant) initiates the automobile claims process using an I/O device 1. Preferably, the process is initiated via the insurance carrier's system 65 but it could also be initiated directly with the system 30.

At step 401, the consumer commences the FNOL process by selecting the FNOL menu option or link from the insurance carrier's system 65.

At step 403, the insurance carrier's system 65 retrieves the consumer's profile information including policy and coverage data from the carrier's legacy system 68 and forwards that data via a secure communication medium 61 to the system 30. This enables the system 30 to pre-populate Claims/Estimates 180c data fields from the database server 55 on the FNOL screen relating to insured vehicles, drivers, and coverage which facilitates processing the claim with accurate and relevant data.

At step 406, the insurance carrier's system 65 forwards the consumer's I/O device 1 via the communication network 25 to the claims module 165h of the system 30, which is co-branded with the insurance carrier's identity. The insurance carrier's system 65 data fields that were transferred in step 306 are mapped at the system 30's application layer 165 to database server 55's Claims/Estimates 180c data fields and forwarded to the consumer's I/O device 1 for the consumer's review.

At step 409, the consumer completes FNOL on his or her I/O device 1 by answering a series of automobile claim related questions retrieved by the claims module 180c from database server 55 and submitting the replies to the questions via the communication network 25 to the Claims/Estimates 180c database. The claims module 165h branches questions based on business rules module 165c that require additional questions to be completed. For example, the automobile claim will have questions relating to bodily injury. If the consumer answers in the affirmative, there will be additional questions to provide detail about the injured parties and the sustained injuries.

At step 412, in the preferred FNOL process, the consumer selects appropriate service providers (e.g., repair facilities, rental agencies, towing services) using their I/O device 1. Preferably, the repair facility also includes but is not limited to rental and towing services. As part of the FNOL screen, the consumer is offered the option of choosing the link or icon to select a service provider. This option transfers the consumer's client software 151 view to the industry directory 165j listing of automobile related service providers. The FNOL, however, can be submitted without service provider selections in the event that the consumer has already made

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repair facility choices outside the FNOL process or does not wish to make a selection at that point.

At step 415, the completion of steps 409 and 412 triggers the claims module 165h of the system 30 to initiate the process of ordering a police report. Business rules module 165c determines from the automobile claim data in Claims/Estimates 180c database whether the report exists in the police report 180g database. If the report does not exist in the police report 180g database, the business rules module 165c determines to which police report system 85 the request should be transmitted. Preferably, the request is transmitted via the secured communication medium 61. Alternatively, the request may be transmitted through an I/O device 1, as described in FIG. 1, via the communications network 25.

At step 418, the system 30 retrieves the consumer's Claims/Estimates 180c data and transmits it via the communication medium 61 to the insurance carrier's system 65.

The system 30 retrieves the consumer's claim data from Claims/Estimates 180c and transmits it via the communication network 25 to the repair facility's personal computer 2 (other service providers that were selected such as rental agencies, or towing service providers are signaled in the same manner). The data includes any available detail that facilitates the service provider in performing its task. For example, the repair facility receives vehicle and damage information and a rental agency receives scheduling information.

At step 420, the consumer and repair facility communicate via their respective I/O devices 1 to schedule an appraisal appointment. Preferably, the consumer uses his or her I/O device 1 to access the scheduling feature of the claims module 165h at the application layer 165. Alternatively, the consumer may elect to contact the repair facility directly via telephone 15. The repair facility then uses its I/O device 1 to review and update its schedule via the claims module 165h.

The appointment occurs at the repair facility's location. If towing or rental services were selected in step 412 they would also be coordinated as part of this scheduling step.

The repair facility determines the extent of service required to satisfy the claim. An estimate for the services and associated costs is generated using third party estimation software on the repair facility's personal computer 2 such as those provided by ADP, CCC, and Mitchell.

At step 421, the estimate data is submitted online to the application server 50 of system 30 using the repair facility's personal computer 2. Preferably, the estimate is saved to a claims datafile on the repair facility's I/O device 1 and the same I/O device 1 forwards the estimate to the system 30 via communication network 25 using client software 151.

At step 422, once the repair facility estimate is on the application server 50, it is converted from the format used by the third party estimation software, or other tool, into a universal format by the system 30's translation engine 165b.

At step 424, the translated estimate is passed to the audit module 165a, which applies insurance carrier specific parameters and comprehensive trending analysis to flag any inconsistencies and prevent irregular practices by the repair facility. This includes but is not

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limited to checks against local market labor rates and charges, evaluation of the estimate relative to the industry's best business practices, decoding of VIN to ensure selection of accurate parts, generation of reports detailing savings opportunities and summarizing line by line cost variances. The translated and audited estimate is stored on the Claims/Estimates 180c.

At step 427, before the Claims/Estimates 180c data can be sent to the insurance carrier's system 65 the business rules 165c checks the police report 180g data to determine if the report specific to this claim is available.

At step 430, if the police report is not available the business rules module 165c initiates the police report acquisition process, as detailed in FIG. 5.

At step 431, if the report is available in the police report 180g database, then it is retrieved by the claims module 165h and attached to the Claims/Estimates 180c data.

At step 433, the claim data including the police report data in Claims/Estimates 180c is transferred in its universal format to the carrier's adapter 67, via the communication medium 61, where it is converted from the universal format to the carrier's preferred format and stored in the carrier's legacy system 68.

At step 436, if the repair facility's estimate data was approved in accordance with business rules module 165c, the escrow engine 165e authorizes the trust account stored on the Trust/Bank system 90 to make payments against the insurer's chosen financial instrument (e.g., line of credit). The escrow engine 165e signals the financial module 165d of the system 30 to manage payments. The business rules module 165c generates an e-mail notification to the repair facility personal computer 2 indicating approval of the estimate. The e-mail will contain a hyperlink back to the system 30 so that the repair facility personal computer 2 can view the Claims/Estimates 180c data.

If the estimate was not approved by step 436, the system 30 signals the insurance carrier's system 65 or sends an e-mail to an adjuster at the carrier company to review the data.

At step 439, the adjuster retrieves the claim information from the carrier's legacy system 68 and views the claim information using their I/O device 1. The adjuster may modify the claim or estimate data and determines if the estimate is approved or not. The adjuster's ruling and any modifications to the claim data are saved to the carrier's legacy system 68 and transmitted from the insurance carrier system 65 to system 30's database server 55 via the secure communication medium 61. The transaction is the reverse of step 433, in particular, the claim data is converted into its universal format using the carrier's adapter 67 and transmitted over the communication medium 61 to the system application server 50 and saved to the database server 55.

At step 442, the receipt of the revised claim data by application server 50 initiates business rules module 165c, which generates an e-mail notification to the repair facility personal computer 2 indicating approval or rejection of the estimate. The e-mail notification contains a hyperlink back to the system 30 so that the repair facility personal computer 2 can view the updated Claims/Estimates180c data.

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At step 445, once the claim has been approved as indicated in step 442, the escrow engine 165e notifies the financial module 165d that payments are authorized.

At step 448, the repair facility begins to fulfill the claim-related services. The system 30 ties the payment path with the delivery of these services, as described in step 454 which follows. For each financial transaction, the financial module 165d formats and stores invoice and payment documentation in the financial 180e database in conformity with carrier requirements, as specified by the business rules module 165c.

At step 451, the system 30 financial module 165d determines if the repair facility is a trusted trading partner by using the repair facility specific data from the system 30's service provider 180d database.

At step 454, where the repair facility is trusted, the trust account on the Trust/Bank system 90 is activated to pay portions of the total claim on a continuum stipulated by the escrow engine 165e that matches progress of the service. If the repair facility is not trusted, the trust account tracks progress of the repair for status tracking that will be stored as part of the claim object 180c. Service updates are provided by the repair facility using their I/O device 1. Preferably, the repair facility uses client software 151 to access only its claim-related records from the database server 55. Alternatively, client software 151 extracts workflow data from a third party workflow application on the repair facility's personal computer 2.

At step 457, preferably, the repair facility procures any required, parts, materials, supplies, and/or services online using its I/O device 1. The repair facility uses its client software 151 to access the system 30's e-commerce module 165f marketplace or auction module 165k on application servers 50. The repair facility can order or bid for materials and services, respectively.

At step 460, the repair facility accepts and validates the completion transaction when all parts, materials, supplies are received. This validation is provided by the repair facility's personal computer 2 to the escrow engine 165e via their client software 151.

At step 463, when the transaction is validated, the escrow engine 165e signals the financial module 165d to issue payments to the vendor with trust funds. The account on the Trust/Bank system 90 is updated to reflect this payment. This is performed based on payment terms for that vendor in the financial 180e database.

At step 466, preferably, the repair facility requests for sublet services are implemented online via the repair facility's I/O device 1.

At step 469, the repair facility accepts and validates the completion of the transaction when all sub-services are completed. This validation is provided by the repair facility's personal computer 2 to the escrow engine 165e via its client software 151.

At step 472, when the transaction is validated, the escrow engine 165e signals the financial module 165d to issue payments to the sublet service provider with Trust/Bank funds. The financial record stored on the financial database180e and the account on the Trust/Bank

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system 90 are updated to reflect this payment. The issuance of payment is based on payment terms for that service provider in the financial module 165d.

At step 475, the database record for the repair facility 180d is retrieved to determine if the repair facility is trusted. For example, insurance carriers will have a set of repair facilities that are part of their direct repair program. The service provider 180d database stores this information on the database server 55 to help determine the level of trust associated with a given repair facility.

At step 478, if the repair facility is trusted, the escrow engine 165e signals the financial module 165d to pay the repair facility it's profit margin on the purchase/sub-service concurrent with the vendor/sub-service payment. The payment is made from the account on the Trust/Bank system 90.

At step 481, the repair facility completes the required services. Any other services such as car rental are completed at this time. All completed purchase/sub-service are noted in the claim file stored in the Claims/Estimates 180c database. Status updates and any additional details are provided by the repair facility during service using their I/O device 1 and stored as part of the Claims/Estimates 180c data on the database server 55.

At step 484, when the claim services are completed, the consumer completes the consumer satisfaction survey. Preferably, the consumer uses his or her I/O Device 1 to review the customer satisfaction survey questions stored in CSI 180f that are retrieved by the CSI engine 165g. Alternatively, the consumer completes a paper version of the survey and sends that to a data entry group that uses I/O devices 1 to forward the responses to the CSI engine 165g for storage in the CSI 180f database on the database server 55.

The results of the consumer satisfaction survey are retrieved from the database server 55 and compiled by the CSI engine 165g where an algorithm generates a composite index for the survey and updates the overall index for that repair facility entry in industry directory 180h database to incorporate the new result. The resulting overall CSI index will be displayed by the industry directory module 165j next time the repair facility's data 180h is accessed from system 30's data layer 180.

At step 487, once the consumer satisfaction survey is completed, the escrow engine 165e authorizes the financial module 165d to release the remaining balance of the claim amount to the repair facility from the account on the Trust/Bank system 90. If the repair facility is trusted, any remaining amount is paid.

If the repair facility is not trusted, the total claim (less cost of purchases/sub-services) is paid from the account on the Trust/Bank system 90.

FIG. 5 illustrates the police report acquisition method, in accordance with the present invention, referred to in FIG. 4. At step 500, a member of a police department generates a police report. Preferably, the member of the police department creates a police report at the accident scene using an I/O device 1 such as a wireless device 5, embedded device 10 or telephone 15. The police report comprises data relevant to the accident including details regarding the vehicles and drivers involved in the accident, visible damage or injuries, details of the accident scene,

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details of the events leading up to and including accident and any other relevant data (e.g., witnesses, etc.). This police report is subsequently stored on the police department report system 85 (e.g., legacy system 87).

At step 505, the police report is transmitted from the legacy system 87 to system 30's police report 180g database stored on database server 55. Preferably, a member of the police department transmits the completed police report from the police department's legacy system 87 to the system 30 through adapter 86 via a secure communications medium 61.

At step 510, the police report is received by system 30 and stored in the police report 180g database.

At step 515, the police report is screened by the claims module 165h for attachment to existing insurance Claims/Estimates 180c datafile. Preferably, the newly saved police report is screened to determine if the report correlates to an insurance claim for a preexisting insurance Claims/Estimates 180c datafile. The screening process compares such relevant information as the Vehicle Identification Number (VIN), date, time and location of accident from the police report to the corresponding data in the existing insurance Claims/Estimates 180c datafile. If a screened police report correlates to an existing insurance Claims/Estimates 180c datafile the police report data is attached to the corresponding insurance Claims/Estimates 180c datafile.

At step 517, if the screened police report does not correlate to an existing insurance Claims/Estimates 180c datafile, there is no direct action. However, the police report is now available in the event an insurance Claims/Estimates 180c datafile is created subsequent to the system 30 receiving the police report.

At step 530, the system 30 generates a request for a police report for every insurance Claims/Estimates 180c datafile that is created. Preferably, while generating an insurance Claims/Estimates 180c datafile for storage in that datafile, the system 30 executes a stored procedure to search and screen the police reports 180g database to determine if a police report correlates to the newly created insurance Claims/Estimates 180c datafile. This inquiry compares certain information contained in the insurance Claims/Estimates 180c datafile, such as VIN, date, time and location of accident to data within existing police reports 180g datafile.

At step 535, the system 30 repeatedly generates a request for a police report for every unsatisfied insurance Claims/Estimates 180c datafile without a police report attached thereto. Preferably, a predetermined sequence of computer steps (procedure) is stored on database server 55. This procedure selects insurance Claims/Estimates 180c datafile claims to determine if any insurance Claims/Estimates 180c datafiles exist with no police report attached. For all selected insurance claim datafiles, the procedure scans the police reports 180g database to determine if any police reports relate to these selected insurance Claims/Estimates 180c datafiles using relevant information, such as VIN, date, time and location of the accident. The procedure will then attach police reports that correlate to the selected claims.

At step 537, the system 30 executes the stored procedure on a predetermined time schedule, attaching any identified correlated insurance Claims/Estimates 180c datafiles and police reports, if a police report is required by business rules module 165c.

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At step 539, if there are no matched selected insurance claims and correlated police reports, no action is taken.

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System and Method of Administering, Tracking and Managing of Claims Processing
System Architecture

Figure 1
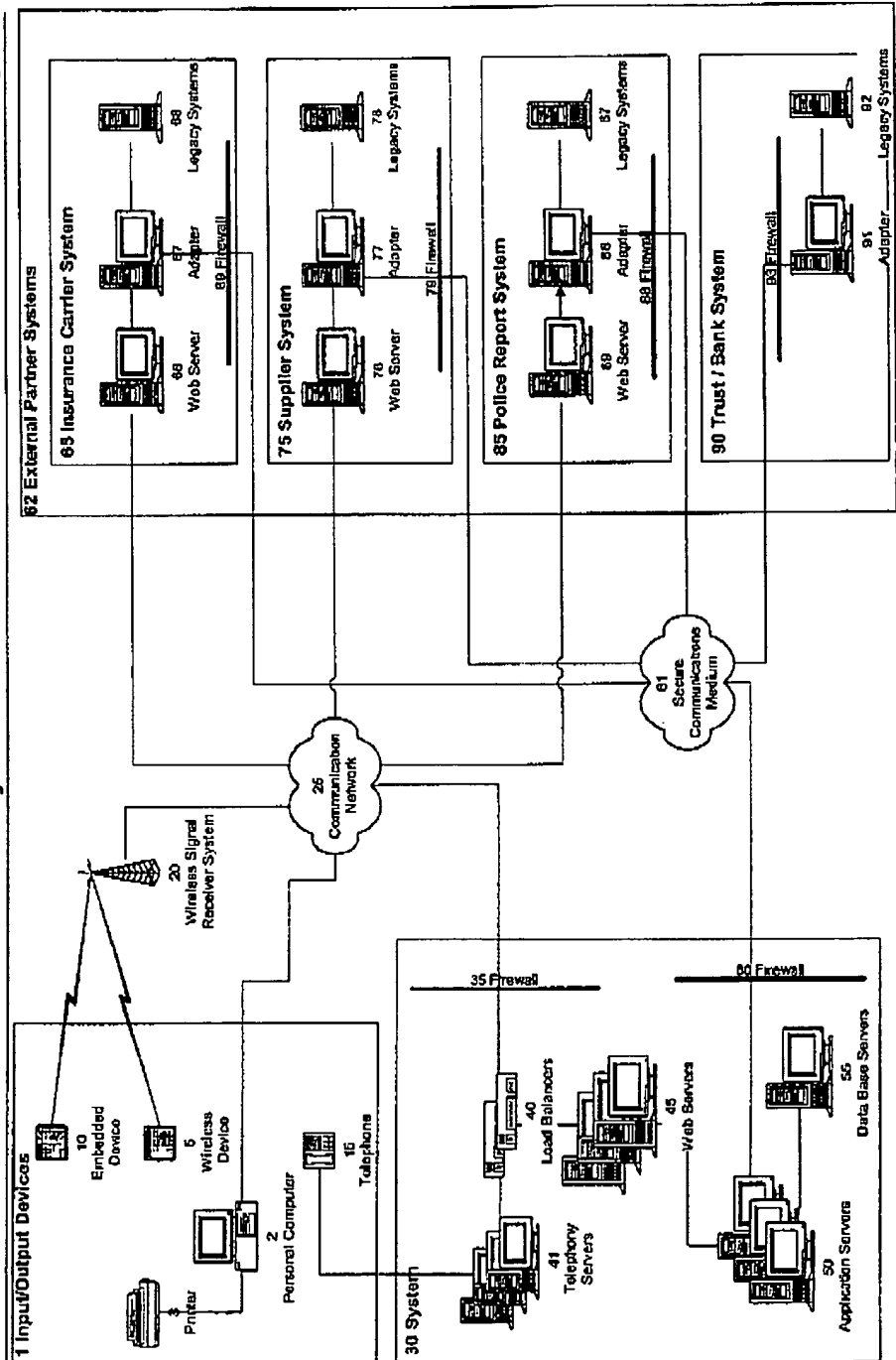
System and Method of Administering, Tracking and Managing of Claims Processing
System Components

Figure 2

150 User Interface

| 151 Client Software | 152 Voice Based Interface | 153 Wireless Interface |

160 Web Layer

165 Application Layer

160a User Authentication Module

165a Audit Module	165b Translation Engine	165c Business Rules Module	165d Financial Module	165e Escrow Engine
165f E-commerce Module	165g CSI Engine	165h Claims Module	165i Workflow Engine	165j Industry Directory Module
165k Auction Module	165l Voice Recognition Module	165m Reporting Module	165n Data Mining Module	

170 Enterprise Application Interface (EAI)

180 Data Layer

| 180a Customer | 180b Product | 180c Claims / Estimates | 180d Service Providers | 180e Financial | 180f CSI | 180g Police Report | 180h Industry Directory |

62 External Partner Systems

171 Agent

172 Internal System
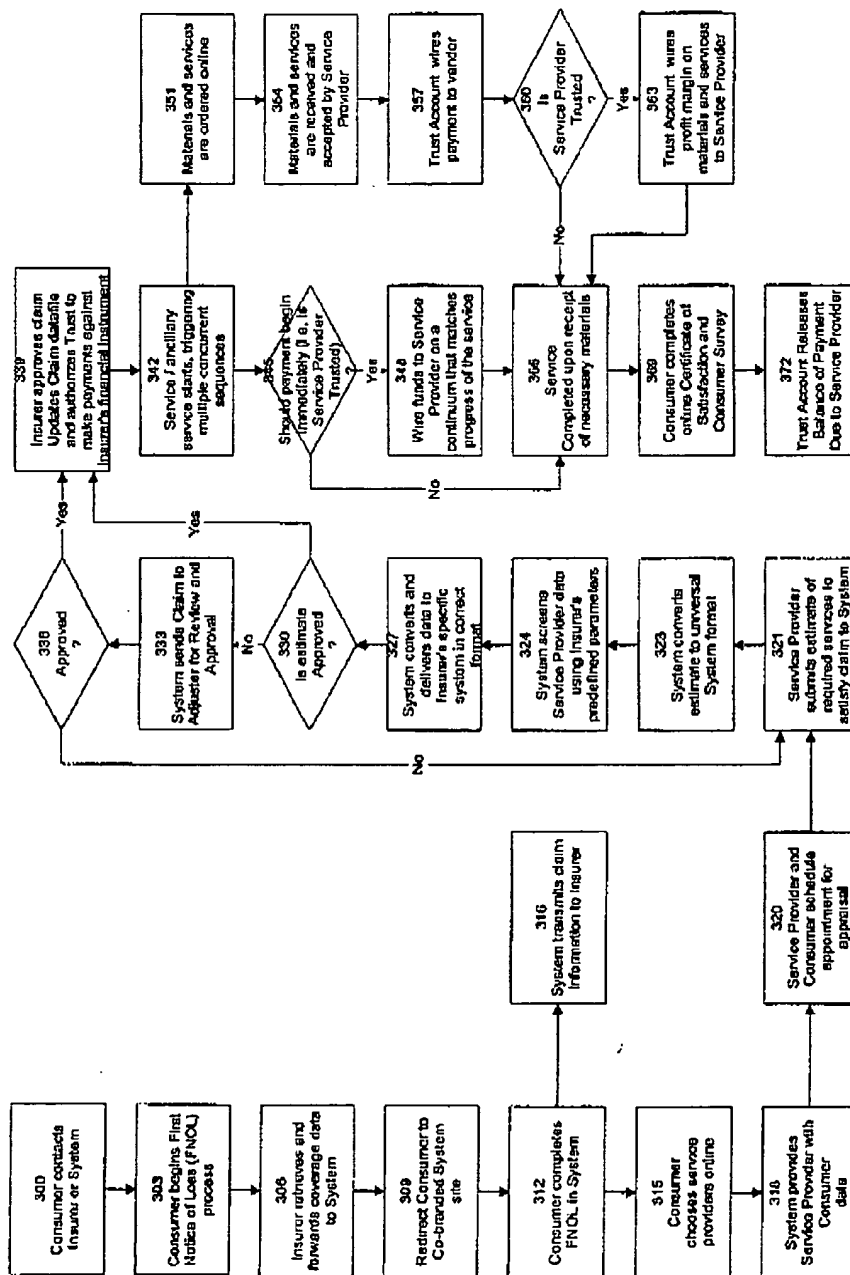
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Figure 3
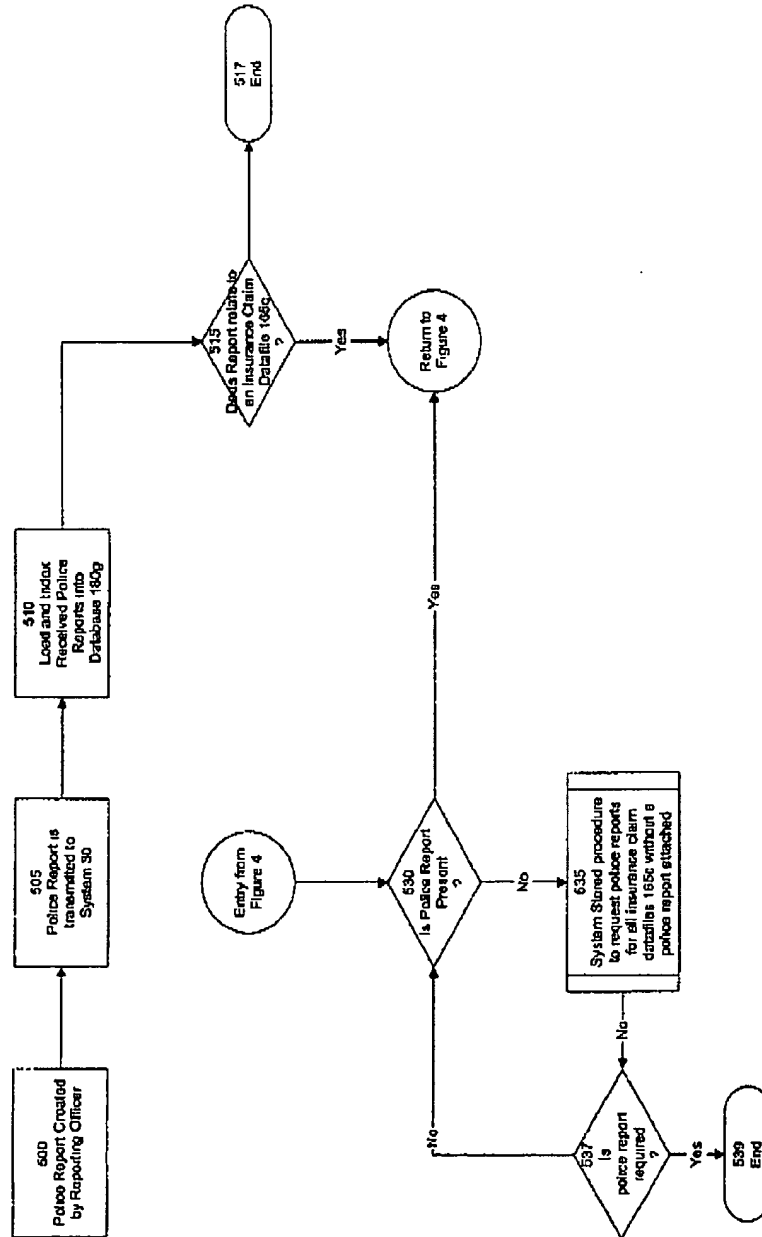
System and Method of Administering, Tracking and Managing of Claims Processing
General Insurance Claim Process Flowchart

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System and Method of Administering, Tracking and Managing of Claims Processing
Automobile Insurance Claim Process Flowchart

Figure 4

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System and Method of Administering, Tracking and Managing of Claims Processing
Police Report Acquisition Process Flowchart   Figure 5

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